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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,892	03/09/2004	Gary M. Palmgren	59473US002	5057
32692	7590	11/19/2004	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY			NGUYEN, DUNG V	
PO BOX 33427			ART UNIT	PAPER NUMBER
ST. PAUL, MN 55133-3427			3723	

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/797,892

Applicant(s)

PALMGREN, GARY M.

Examiner

Dung V Nguyen

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 10-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 4-9 and 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/27/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 10-13, 16, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Benner et al (USPN 6,508,697). Benner et al discloses a pad conditioner 15 comprising an abrasive disk 36 comprising an abrasive surface and a second surface opposite the abrasive surface, an undulating disk 39 having an undulating surface proximate the second surface of the abrasive disk 36, the undulating disk 39 comprising at least one raised portion 33 and at least one recess portion, wherein the abrasive disk 36 is releasably affixed to a portion of the recessed portion to form an undulated abrasive surface, wherein the pad conditioner 15 is a chemical mechanical planarization pad conditioner, wherein the undulating disk further comprises an undulating plate 39 and a backing plate 30, wherein the pad conditioner comprising at least three recessed portions, wherein the undulating disk comprises a patterned undulated surface, wherein the patterned undulated surface has a step pattern. Benner et al also discloses a method of conditioning a polishing pad 12 comprising contacting the pad 12 with an abrasive article 15 comprising an abrasive disk 36 and undulating disk 39 that form an undulated abrasive layer, moving the abrasive article 15 relative to the pad 12 to modify a surface 12a of the pad 12, wherein the abrasive disk 36 is affixed

Art Unit: 3723

to the undulating disk 39 with at least one removable fastener (note Fig. 4-8, col. 6, line 21 to col. 7, line 6).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 14, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benner et al (USPN 6,508,697). Benner et al discloses the claimed invention as described above, however, Benner et al does not disclose a patterned undulated surface comprises an offset in range from about 0.25 mm to about 0.75 mm or raised portion is in a range from about 33 percent to about 66 percent of the area of the patterned undulated surface. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select an offset in range from about 0.25 mm to about 0.75 mm or raised portion is in a range from about 33 percent to about 66 percent of the area of the patterned undulated surface, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Allowable Subject Matter

Art Unit: 3723

5. Claims 4-9 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gurusamy et al and Shipley et al are cited to show pad conditioners.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung V Nguyen whose telephone number is 703-305-0036. The examiner can normally be reached on M-F, 6:30-3:00.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail can be reached on 703-308-2687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DVN
November 17, 2004


DUNG VAN NGUYEN
PRIMARY EXAMINER